CLAIMS:

1. An aluminum nitride junction body comprising two pieces of aluminum nitride sintered plates joined to each other, and a sintered metal layer of tungsten or molybdenum formed on a junction surface thereof, said sintered metal layer having a thickness of 15 to 100 μm, wherein a sheet resistivity of the sintered metal layer is not larger than 1 Ω/□, warping of the sintered metal layer is suppressed to be not larger than 100 μm/100 mm, and a shear strength between the sintered metal layer and the aluminum nitride sintered plate on the junction surface is not smaller than 4 kg/mm^2.

2. An aluminum nitride junction body according to claim 1, wherein the area ratio of the sintered metal layer on the junction surface is in a range of 50 to 90%.

3. A method of producing an aluminum nitride junction body comprising the steps of:

providing two pieces of aluminum nitride sintered plates;

forming a recessed portion in a surface of one aluminum nitride sintered plate;

charging an electrically conducting paste containing, as a conductor component, a tungsten powder or a molybdenum powder having an average particle size (D_{50}) of not larger than 3.5 μm into the recessed portion;

forming an adhesive layer by applying an adhesive paste containing aluminum nitride as an adhesive component onto a whole surface of the aluminum nitride sintered plate charged with the electrically conducting paste;

dewaxing the electrically conducting paste and

the adhesive paste;

effecting a primary sintering while contacting the other aluminum nitride sintered plate onto the surface where the adhesive layer is formed of the aluminum nitride sintered plate with a pressure of 0.5 to 10 MPa at a temperature of 1600 to 1700°C for 0.5 to 4 hours; and

effecting a secondary sintering at a temperature of 1800 to 1900°C for 2 to 8 hours following the primary sintering.

4. A method of producing an aluminum nitride junction body according to claim 3, wherein the electrically conducting paste is charged into the recessed portion in an amount, calculated as a solid component, of 1.05 to 1.5 times as great as the volume of the recessed portion.